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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|-------------------------|------------------|
| 09/845,803 | 04/30/2001 | Eldad Zeira | 1-2-162.1US | 3229 |
| 24374 7590 02/09/2007 VOLPE AND KOENIG, P.C. DEPT. ICC UNITED PLAZA, SUITE 1600 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103 | | | EXAMINER JAIN, RAJ K | |
| | | | ART UNIT 2616 | PAPER NUMBER |
| SHORTENED STATUTORY PERIOD OF RESPONSE | | MAIL DATE | DELIVERY MODE | |
| 3 MONTHS | | 02/09/2007 | PAPER | |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/845,803 | ZEIRA ET AL. | |
| | Examiner | Art Unit | |
| | Raj K. Jain | 2616 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 May 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 25-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miya et al (US 200200161) in view of Endo et al (US006035210A).

Regarding claims 25, 28, 31, and 34 Miya discloses a means, method and apparatus for downlink power control for use in a spread spectrum time division communication system having time slots for communication (see Fig. 1, paras 0009 and 0020) comprising:

- at a user equipment, receiving a CCTrCH over a plurality of time slots and transmitting a single power command to a base station in response to a signal to interference ratio of the received CCTrCH (see Figs 2 and 5, paras 0009, 0058-0060, the mobile stations receives the signal via the control channel from the base station and transmits a TPC (power control) signal to the base station based on SIR measurements from the previous time slot. Figs. 2 & 5, disclose transmission and reception intervals of a mobile station in a communications system with plurality of time slots being either transmitted or received.);

- a transmission power level for each time slot of the plurality of time slots is set individually in response to the interference power measurement for that time slot and

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the single power command (see Figs 2 and 5, paras 0009, 0058-0060, the mobile station performs the SIR measurements for each time slot from a plurality of time slots individually and transmits a TPC signal (D_i) back to the base station to increase or decrease downlink power transmission in the next time interval sequence).

Miya fails to disclose the user equipment sending interference power measurements to the base station.

Endo discloses the user equipment sending interference power measurements to the base station (see col 2 lines 17-22, col 10 lines 39-53).

Sending interference power measurements to the base station improves reception qualities for all users within a cell by minimizing the transmit power from the base station to the mobiles and therefore reducing overall network interference to each end user.

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Endo within Miya of sending interference power measurements to the base station so as to improve reception qualities for all users within a cell by minimizing the transmit power from the base station to the mobiles and therefore reducing overall network interference to each end user.

Regarding claims 26, 29, 32, and 35 Miya discloses the use of time slots/frames for transmission of power control (see para 0009, 0058-0060 and Fig 5). Miya discloses the TDD frame format by time dividing the radio frequency and representing the timeslots with transmission timing " i " where $i=0,1,\dots$ representing the individual slots.

The mobile station (MS) power control is based on the SIR measurements carried out by the MS for each timeslot "i".

Regarding claims 27, 30, 33, and 36 Miya discloses calculating interference power measurements for each timeslot based on the downlink reception data (R_i) received at the mobile station (see paras 0025, 0058-0060, Fig 5).

Response to Arguments

Applicant's arguments filed 20 November 2006 have been fully considered but they are not persuasive.

Applicant contends "Miya sends individual TPC for each timeslot, and fails to disclose use of a single power command for the CCTrCH which includes a plurality of timeslots. Such an arrangement is not disclosed in Miya."

The examiner respectfully disagrees, the applicant clearly describes within its specifications the correlation of TPC with CCTrCH (para 0007 of the spec) that is the TPC adjusts the transmit power level in all time slots, which is well known in the arts. However, Miya discloses power measurements for a single time slot (emphasis added) again see Figs 2 and 5, paras 0009, 0058-0060, the mobile station performs the SIR measurements for each time slot from a plurality of time slots individually and transmits a TPC signal (D_i) back to the base station to increase or decrease downlink power transmission in the next time interval sequence for a single time slot. Furthermore, applicant's attention is directed to the claims in specifically which state here in part

"a single power command in response to a signal to interference ratio...."
emphasis added. Clearly the change in power is based on the S/R ratio which is clearly disclosed by Miya in paras 0058-0060.

Furthermore, Endo was cited for disclosing the transmission of interference measurements since the recited claims of applicant include interference measurements. Sending interference power measurements to the base station improves reception qualities for all users within a cell by minimizing the transmit power from the base station to the mobiles and therefore reducing overall network interference to each end user.

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Endo within Miya of sending interference power measurements to the base station so as to improve reception qualities for all users within a cell by minimizing the transmit power from the base station to the mobiles and therefore reducing overall network interference to each end user.

Thus since Miya and Endo do disclose either alone or in combination the recited claim limitations, therefore claims 25-36 stand rejected.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

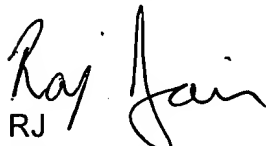
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raj K. Jain whose telephone number is 571-272-3145. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


RJ
February 5, 2007